



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX

Underground Storage Tanks Program Office
75 Hawthorne Street (WST-8)
San Francisco, CA 94105

April 25, 2000

REFER TO WST-8
AND SITE #WMAP-004
Certified Mail: P 389 854 761

Ms. Elaine Kessay
White River Unified School District #20
Transportation Department
P. O. Box 190
Whiteriver, AZ 85027

Dear Ms. Kessay:

This correspondence refers to the tank removal report prepared by the Verde Company for the removal of one underground storage tank (UST) at the Transportation Department of the White River Unified School District #20 in Whiteriver, Arizona, on land of the White Mountain Apache Tribe.

Our review of the closure documents and analytical results for soil samples collected at the UST site indicates no hydrocarbon concentrations above appropriate EPA, Region IX or tribal soil cleanup levels.

The information submitted has assisted EPA in assessing the status of this site, where one 4,000-gallon UST was removed on June 29, 1999. This site does not appear to pose a current threat to human health and the environment. Therefore, EPA is not requiring further action at this time.

Sincerely,

A handwritten signature in black ink, appearing to read "Lester Kaufman, for".

Lester Kaufman, Chief
Underground Storage Tanks Program Office

Enclosure

cc: Kirk Massey, Sr., White Mountain Apache Tribe, EPO
Benjamin H. Nuvamsa, Bureau of Indian Affairs
Dennis Williams, Indian Health Service

Attachment: List of Contacts

Kirk Massey, Sr.

Environmental Planning Office

White Mountain Apache Tribe

P. O. Box 1150

Whiteriver, AZ 85941

(520) 338-4346, Ext. 225

Benjamin H. Nuvamsa, Superintendent

Bureau of Indian Affairs, Ft. Apache Agency

P. O. Box 560,

Whiteriver, AZ 85941

(520) 338-5353

Dennis Williams, District Sanitarian

Indian Health Service

P. O. Box 2430

Pinetop, AZ 85935

(520) 338-4911

REFER TO WST-8
AND SITE #WMAF-004
Certified Mail: P 389 854 761
April 25, 2000

Ms. Elaine Kessay
White River Unified School District #20
Transportation Department
P. O. Box 190
Whiteriver, AZ 85027

Dear Ms. Kessay:

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Our review of the closure documents and analytical results for soil samples collected at the UST site indicates no hydrocarbon concentrations above appropriate EPA, Region IX or tribal soil cleanup levels.

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Sincerely,

Lester Kaufman, Chief
Underground Storage Tanks Program Office

Enclosure

cc: Kirk Massey, Sr., White Mountain Apache Tribe, EPO
Benjamin H. Nuvamsa, Bureau of Indian Affairs
Dennis Williams, Indian Health Service

SYMBOL	WST-8	WST-8	WST-8	WST-8	WST-8	
SURNAME	GUGGENHEIMER	Prokop	THOMAS	BRASSNER	Colson	
DATE	4/12/00	4/12/00	4/19/00	4/24/00	4/24/00	
U.S. EPA CONCURRENCES			OFFICIAL FILE COPY			

P 389 854 751

**Receipt for
Certified Mail**

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES
POSTAL SERVICE

Sent to
Ms. Elaine Kessay

Street and No.
White River Unified School

P.O., State and ZIP Code
District # 20 Transp. Dist

Postage
P.O. Box 190

Certified Fee
White River, AZ 85027

Special Delivery Fee

Restricted Delivery Fee

Return Receipt Showing
to Whom & Date Delivered

Return Receipt Showing to Whom,
Date, and Addressee's Address

TOTAL Postage & Fees

Postmark or Date
Mailed: 4/25/00

WMHAR 004

PS Form 3800, June 1991



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
Underground Storage Tanks Program Office
75 Hawthorne Street (WST-8)
San Francisco, CA 94105

REFER TO WST-8
AND SITE #WMA-004
Certified Mail P 389 855 302

Ms. Dawn Vann
The Verde Companies, Inc.
2703 Union Drive, Suite 1
Cottonwood, AZ 86326

Dear Ms. Vann:

This correspondence refers to your letter dated June 11, 1999 regarding the removal of one 6,000-gallon and one 15,000-gallon underground storage tank (UST) at the White River Unified School District #20. These USTs are located at the transportation department and middle school, respectively. Both sites are located on land of the White Mountain Apache Tribe.

The following is a summary of our current requirements for tank removals and related information regarding tank owner/operator duties and responsibilities:

The regulations require that the owner/operator notify the U.S. Environmental Protection Agency (U.S. EPA) **at least thirty days before the initiation of the planned UST removal.** This notification period may be shortened only by agreement of the U.S. EPA and the respective tribal authorities with an accelerated schedule. Legible postmarks are acceptable as the beginning of the 30-day notification period. Your letter dated June 11, 1999 showed a planned removal date of June 28 to June 30, 1999. **This date has been coordinated with Mr. Walter Guggenheimer, U.S. EPA, Region IX and Kirk Massey of the tribal environmental office who will be on-site during all activities associated with the tank removal.** Any change in the removal date must be discussed directly with Mr. Massey at the telephone number and address listed on the enclosure to this letter.

The **tank owner/operator** is responsible for meeting all regulatory requirements. **If the contractor is to represent the owner, the U.S. EPA must be notified in writing prior to the tank removal date.** However, please be aware that the tank owner/operator is ultimately responsible for meeting the requirements of Title 40 of the Code of Federal Regulations, Part 280 (40 CFR §280).

The crew chief in charge of tank removals must be experienced in the applicable industry standards and government regulations, including those of the U.S. EPA, OSHA and applicable tribal regulations. The availability at the tank site of proper equipment for carrying

**PERMANENT CLOSURE OF ONE UNDERGROUND
STORAGE TANK SYSTEM**

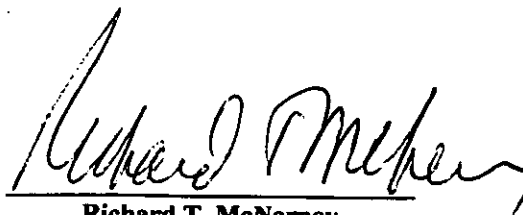
**WHITERIVER UNIFIED SCHOOL DISTRICT
TRANSPORTATION DEPARTMENT
200 CEMETARY ROAD
WHITERIVER, ARIZONA 85941**

EPA Facility ID# WMA-004

**Prepared for:
Whiteriver Unified School District #20
PO Box 190
Whiteriver, Arizona 85941**

**Prepared by:
The VERDE Companies, Inc.
301 W. Deer Valley Road, Ste. 7
Phoenix, Arizona 85027**

July 30, 1999


**Richard T. McNerney
President**

PERMANENT CLOSURE OF ONE UNDERGROUND STORAGE TANK SYSTEM

Whiteriver Unified School District - Transportation Department

200 Cemetary Road

Whiteriver, AZ 85941

EPA Facility ID# WMA-004

UST PERMANENT CLOSURE ASSESSMENT REPORT FORM

1.0 SITE IDENTIFICATION NUMBERS

Facility ID # WMA-004

ADEQ Closure # N/A

Fire Authority Closure Permit # N/A

2.0 LOCATION OF TANK(S)

Whiteriver Unified School - Transportation Dept.

Facility Name

200 Cemetary Road

Street Address (no P.O Box #'s)

Whiteriver, AZ 85941

City, State, Zip Code

Navajo

County

3.0 OWNERS OF TANK(S)

Whiteriver Unified School District #20

Owner Name

Elaine Kessay

Contact Person

PO Box 190

Mailing Address

Whiteriver, AZ 85941

City, State, Zip Code

Legal Location (township, range, section, ¼, ¼, ¼) T-5 N, R-22 E, Sec. 13, NW ¼, SW ¼, NE ¼

Telephone Number (include area code) (520) 338-4842 ext. 274

4.0 CONTRACTOR, LABORATORY AND CONSULTANT INFORMATION

Contractor: The VERDE Companies, Inc.

Certified Individual Randy Kenley

ADEQ Certification No.: D00013

Phone No.: (520) 646-0152

ROC License No.: 113176

Type of License: B-1, L-57, L-5 Other: _____

Laboratory Name: Orange Coast Analytical, Inc.

ADHS License No.: AZ0558

Contact Name: Mike Lanzieri

Phone No.: (602) 736-0960

Consultant: The VERDE Companies, Inc. Contact Name: Richard T. McNerney

Phone No.: (602) 587-8400

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PERMANENT CLOSURE OF ONE UNDERGROUND STORAGE TANK SYSTEM

Whiteriver Unified School District - Transportation Department

200 Cemetery Road

Whiteriver, AZ 85941

EPA Facility ID# WMA-004

5.0 SITE INFORMATIONa. Number of active tanks* at facility
prior to closure or change-in-service: 1b. Number of tanks being closed or
undergoing a change-in-service: 1

c. Will new tanks be installed?

 Yes X Noif yes, how many? When? d. Depth to groundwater (if known): unknownSource: Date:

*do not include previously closed tanks

6.0 SITE PREPARATIONa. Date and time tank(s) emptied of all
product and accumulated sludges:Date: 6/25/99 Time: P.M.

b. Date and time of inerting or purging:

Date: 6/28/99 Time: P.M.c. Method of inerting or purging: CO2
pumped into tanks.

d. Date of closure or change-in-service:

Date: 6/29/99**7.0 INERT SOLID MATERIAL USED TO CLOSE TANK IN-PLACE** X Not Applicable-Tank(s) Excavated Sand Soil Slurry Not Applicable-Change-In-Service (CIS) Concrete Other: **8.0 DIMENSION OF TANK EXCAVATION (S)** Not Applicable-CIS or in-place closure

Excavation I:

Excavation II (complete only if applicable):

Length 30ft Width 10ft Depth 8ftLength Width Depth **9.0 TANK INFORMATION**

Tank No.	Size (gallons)	Material of Construction	Contents Stored	Holes in Tank (yes or no)	Holes in Piping (yes or no)	Unregulated* substance stored
T-1	4,000	Steel	Gasoline	Possible	None	NA

*Complete only for tanks undergoing a CIS

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PERMANENT CLOSURE OF ONE UNDERGROUND STORAGE TANK SYSTEM

Whiteriver Unified School District - Transportation Department

200 Cemetery Road

Whiteriver, AZ 85941

EPA Facility ID# WMA-004

10.0 VISUAL ASSESSMENT

Do the following conditions exist:

Stained Soil: ☒ Yes ☐ No

Water in Excavation: ☐ Yes ☒ No

Petroleum Odor in Soil: ☒ Yes ☐ No

Sheen or Free Product on Water: ☐ Yes ☒ No

Free Product in Excavation: ☐ Yes ☒ No

Evidence of Spill and/or Overfill: ☒ Yes ☐ No

Note: If at any time during the closure or CIS activity contamination is discovered or believed to exist, ADEQ must be notified within twenty-four (24) hours of discovery. The release or suspected release should be reported by calling ADEQ at (602) 207-4364 or at 1-800-234-5677, ext. 4364.

11.0 SOIL INVESTIGATION PROCEDURES

- a. Were all soil samples collected by pushing or driving clean sleeves, constructed of an inert material, into the backhoe or track-hoe bucket per the attached Sampling Guidelines? ☒ Yes ☐ No

If no, describe why not, and alternative method used:

- b. Describe how sleeves were sealed and labeled: **Sleeves were sealed with Teflon and foil sheets, covered with plastic caps, and sealed with non-contaminating tape; each sample was labeled according to tank number and location (example: Tank Pit N). The date and time of sample collection, sampler's initials, and site name were included on the label.**

- c. Were all soil samples preserved at approximately 4 degrees Centigrade prior to delivery to the laboratory? ☒ Yes ☐ No

If no, describe why not:

- d. Describe decontamination procedures for soil sampling equipment: **All equipment was thoroughly decontaminated in an Alconox solution, then double-rinsed in clean, potable water and allowed to air dry.**

- e. Do field investigations indicate contamination? ☒ Yes ☐ No

if yes, what was the methodology used and where were the hot spots located?: **Field observations indicate spills and overfills, stained soil and petroleum odor in soil.**

- f. Estimated volume of excavated soils (cubic yards): 0 cubic yards

- g. Number of samples taken from stockpile: 1

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PERMANENT CLOSURE OF ONE UNDERGROUND STORAGE TANK SYSTEM

Whiteriver Unified School District - Transportation Department

200 Cemetery Road

Whiteriver, AZ 85941

EPA Facility ID# WMA-004

12.0 SITE MAP (To be provided as an attachment to this report form and prepared to scale)

- a. Are all tanks, dispensers and associated piping shown on the site map? ☒ Yes ☐ No

If no, describe why not:

- b. Is the length, width, depth and location of unions and areas of corrosion for each piping run (trench) shown on the Site Plan? ☒ Yes ☐ No

If no, describe why not:

- c. Are all excavations and stockpiles (including stockpiled PCS) shown on the Site Plan? ☒ Yes ☐ No

If no, describe why not:

- d. Are all sampling locations and areas of contamination shown on map? ☒ Yes ☐ No

If no, describe why not:

- e. Are all cross streets and major structures (i.e. buildings) near the excavation zone(s) shown on the Site Plan?

☒ Yes ☐ No

If no, describe why not:

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PERMANENT CLOSURE OF ONE UNDERGROUND STORAGE TANK SYSTEM

Whiteriver Unified School District - Transportation Department

200 Cemetery Road

Whiteriver, AZ 85941

EPA Facility ID# WMA-004

13.0 LABORATORY RESULTS

- a. Identify all samples (including stockpile samples), location of each sample, depth of each sample, soil lithology of each sample and analytical test results of each sample in the table below. (NOTE: ASTM Standard D 2488-93 or a comparable standard should be used when classifying soil lithology). Copies of the laboratory results, including QA/QC information and an original, legible chain-of-custody should be provided as an attachment to this report form. Refer to ASTM Standard D 4840-88 for chain-of-custody procedures. Laboratory results below are presented in parts per million (ppm).

Sample ID No.	Location of Sample	Depth (ft)	Soil Type	TPH as Gasoline mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylenes mg/kg
Tank Pit N	Beneath north end of former 4,000 gallon Gasoline Tank 1	13 ft	Native	<5.0	<0.05	<0.1	<0.1	0.16
Tank Pit S	Beneath south end of former 4,000 gallon Gasoline Tank 1	13 ft	Native	31	<0.05	<0.1	0.35	2.1
Piping Trench	Beneath former piping	3 ft	Native	17	0.13	<0.1	0.16	0.58
Dispenser	Beneath former dispenser	2 ft	Native	29	<0.05	0.12	0.43	1.5
Stockpile	Within stockpile	N/A	Native	26	<0.50	<0.1	0.17	0.94

* If VOC's have been detected, use an X to identify the appropriate sample(s) and use the table on page 6 to provide analytical data.

b. Laboratory Reporting Limits**TPH as Gasoline: 5 mg/kg (ppm)****Benzene: 0.05 mg/kg Toluene: 0.10 mg/kg Ethylbenzene: 0.10 mg/kg Xylenes: 0.15 mg/kg**

NOTE: For non-detects, list the numerical reporting limit, for example, "< 0.25". Do not use ND.

PERMANENT CLOSURE OF ONE UNDERGROUND STORAGE TANK SYSTEM
Whiteriver Unified School District - Transportation Department
200 Cemetery Road
Whiteriver, AZ 85941
EPA Facility ID# WMA-004

13.0 LABORATORY RESULTS (Continued)

- c. Holding time (hours) 72. NOTE: Soil samples to be analyzed for BTEX or other VOC's should be extracted within 72 hours of collection. ADEQ may extend the 72 hour limit to 120 hours with site-specific pre-approval. ADEQ may not consider samples exceeding the extraction holding time as valid and may require additional sampling.
- d. If an extension of the holding time has been granted by ADEQ, provide the date and time the extension was granted and the name of the ADEQ representative that granted the extension. N/A

Date: _____ Time: _____ ADEQ Representative: _____

14.0 THE SPACE BELOW IS PROVIDED FOR ANY ADDITIONAL COMMENTS:

15.0 SERVICE PROVIDER CERTIFICATION

Signature: Richard T. McNerney Date: July 30, 1999

Name: (print): Richard T. McNerney Title: President

Company Name: The VERDE Companies, Inc.

Address: 301 W. Deer Valley Road, Ste. 7

City: Phoenix State: Arizona Zip: 85027

Phone: (602) 587-8400 Fax: (602) 587-8942

Where registration is required by the Board of Technical Registration, please affix seal below:

ADEQ would appreciate receiving the consultant's response to the following question:

"In your professional opinion, has there been a release of a regulated substance at this site?"

*X Yes No

* Analytical results received 7/14/99 showed evidence of TPH and BTEX concentrations.

16.0 VOC RESULTS-N/A

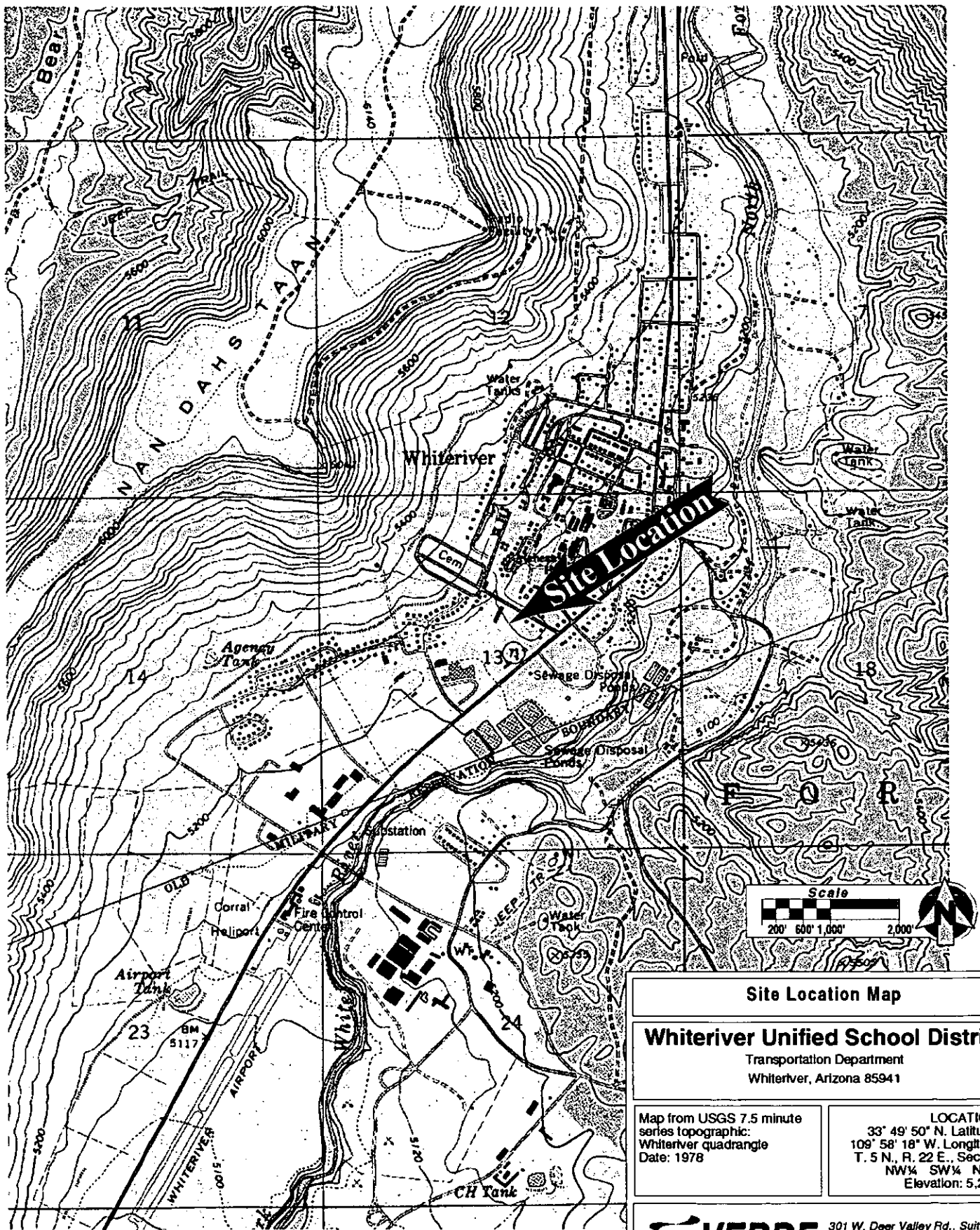
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APPENDIX A

**Whiteriver Unified School District
Transportation Department
200 Cemetary Road
Whiteriver, Arizona 85941**

EPA Facility ID# WMA-004

**SITE MAPS
UNDERGROUND STORAGE TANK SYSTEM WORKSHEET**



Site Location Map

Whiteriver Unified School District

Transportation Department
Whiteriver, Arizona 85941

Map from USGS 7.5 minute
series topographic:
Whiteriver quadrangle
Date: 1978

LOCATION:
33° 49' 50" N. Latitude
109° 58' 18" W. Longitude
T. 5 N., R. 22 E., Sec. 13
NW¼ SW¼ NE¼
Elevation: 5,240'



301 W. Deer Valley Rd., Suite 7
Phoenix, Arizona 85027
(602) 587-8400, (800) 409-6972

Site Map

Whiteriver Unified School District

Transportation Department
Whiteriver, Arizona 85941

Drawn by Gary Romig

Date: 07-12-99

LOCATION:

33° 49' 50" N. Latitude
109° 58' 18" W. Longitude
T. 5 N., R. 22 E., Sec. 13
NW¼ SW¼ NE¼
Elevation: 5,240'



301 W. Deer Valley Rd., Suite 7
Phoenix, Arizona 85027
(602) 587-8400, (800) 409-6972

KEY:

All quantities are parts per million (ppm)

▲ = Soil Sample Location

TPH = Total Petroleum Hydrocarbons

N/A = Not Applicable

Table of Soil Sample Analytical Results

Sample ID & depth	TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes
▲ Tank Pit N 013'	<5.0	<0.05	<0.1	<0.1	0.16
▲ Tank Pit S 013'	31	<0.05	<0.1	0.35	2.1
▲ Piping Trench 03'	17	0.13	<0.1	0.16	0.58
▲ Dispenser 02'	29	<0.05	0.12	0.43	1.5
▲ Stockpile N/A	25	<0.05	<0.1	0.17	0.94

Trailer Office



Gate



Dispenser

Piping Trench

Tank Pit N

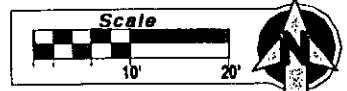
Stockpile

Perimeter of Excavation

Vent

TANK:
4,000 gal
Gas
Bare Steel

Tank Pit S





301 W. Deer Valley Rd., Suite 7
Phoenix, Arizona 85027
(602)587-8400

Client	Whiteriver Unified School District
Facility	Transportation Department
Address	Whiteriver, AZ 85941
Date	06-29-99

Underground Storage Tank System Worksheet

Item	Tank 1	Tank 2	Tank 3	Tank 4	Tank 5	Tank 6	Tank 7	Tank 8
Tank size (in 1000 Gallons)	4							
Year tank Installed	1971							
Product Stored	Gas							
Tank Construction	Stl							
Corrosion Protection: Tank	No							
Overfill Prevention: Tank	No							
Spill Prevention: Tank	No							
Total Depth of Tank	8'							
Diameter of Tank	5'							
Length of Tank	24'							
Secondary Containment: Tank	No							
Pumping System Type	Suction							
Piping Construction	Stl							
Corrosion Protection: Piping	No							
Line Leak Detection: Piping	No							
Secondary Containment: Piping	No							
LEL %	N/A							
Oxygen %	<1%							
Date	6/29/99							
Amount of Water in Tank (inches)	0"							
Product Level Inches	<1"							

Notes:

Key
STL-Steel
FBG-Fiberglass
S/Fbg-Steel coated
with Fiberglass

APPENDIX B

**Whiteriver Unified School District
Transportation Department
200 Cemetary Road
Whiteriver, Arizona 85941**

EPA Facility ID# WMA-004

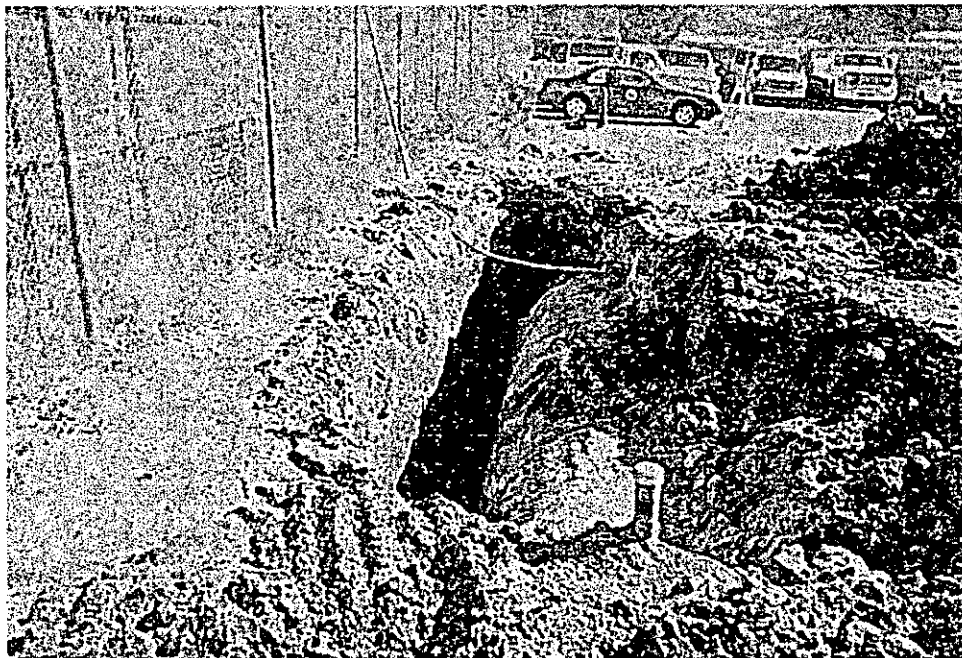
PHOTOGRAPHIC ESSAY

UNDERGROUND STORAGE TANK REMOVAL
Whiteriver Unified School District, Transportation Department
Whiteriver, Arizona
Photo Essay

Photograph 1. A view of the fuel system location along the eastern edge of the property. Note the dispenser seen in the left center of the photo.

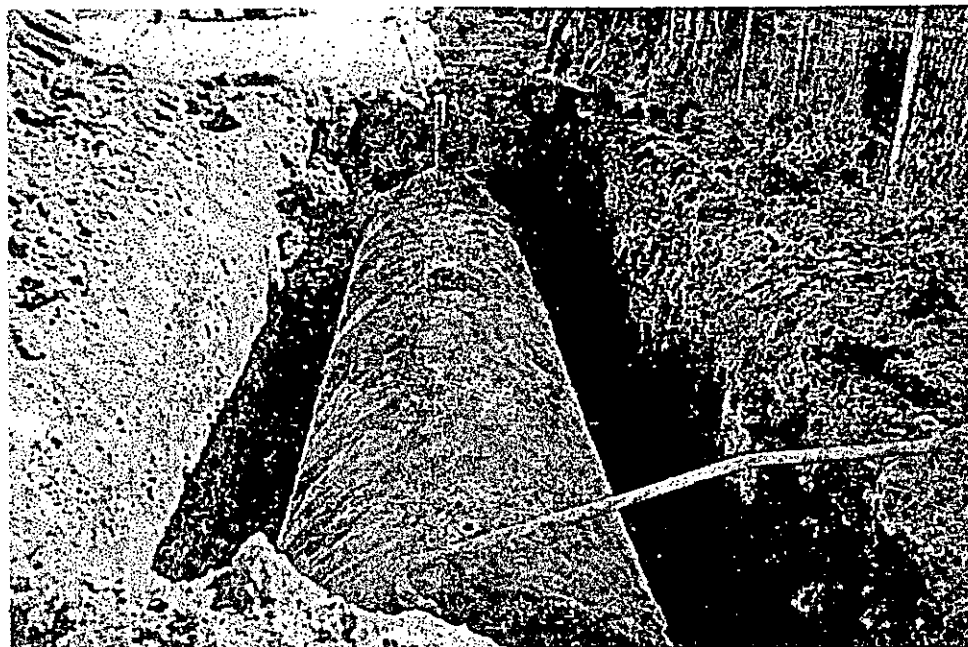


Photograph 2. This view looking south shows the UST partially excavated.

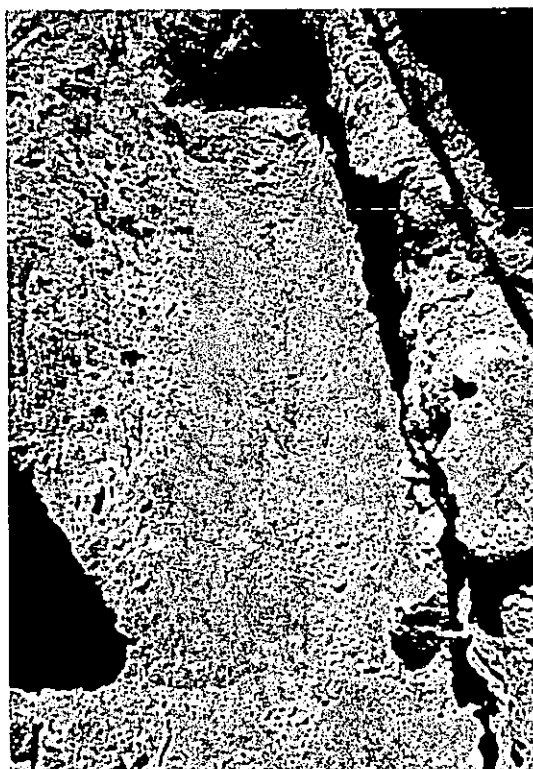


UNDERGROUND STORAGE TANK REMOVAL
Whiteriver Unified School District, Transportation Department
Whiteriver, Arizona
Photo Essay

Photograph 3. Looking north, a view of the UST with the excavation nearly complete.

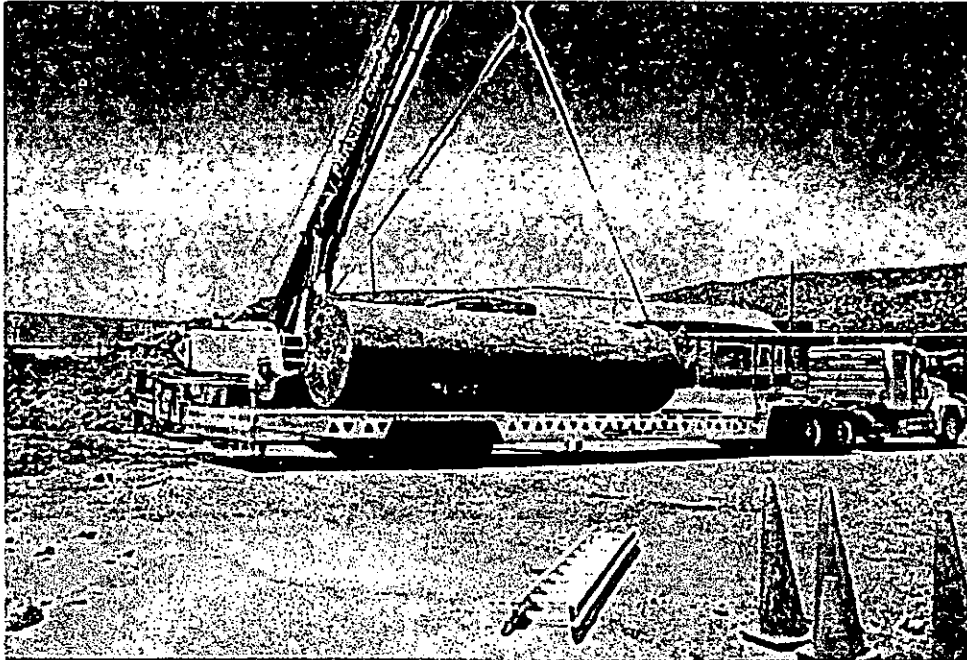


Photograph 4. A view of the excavation zone after UST removal.

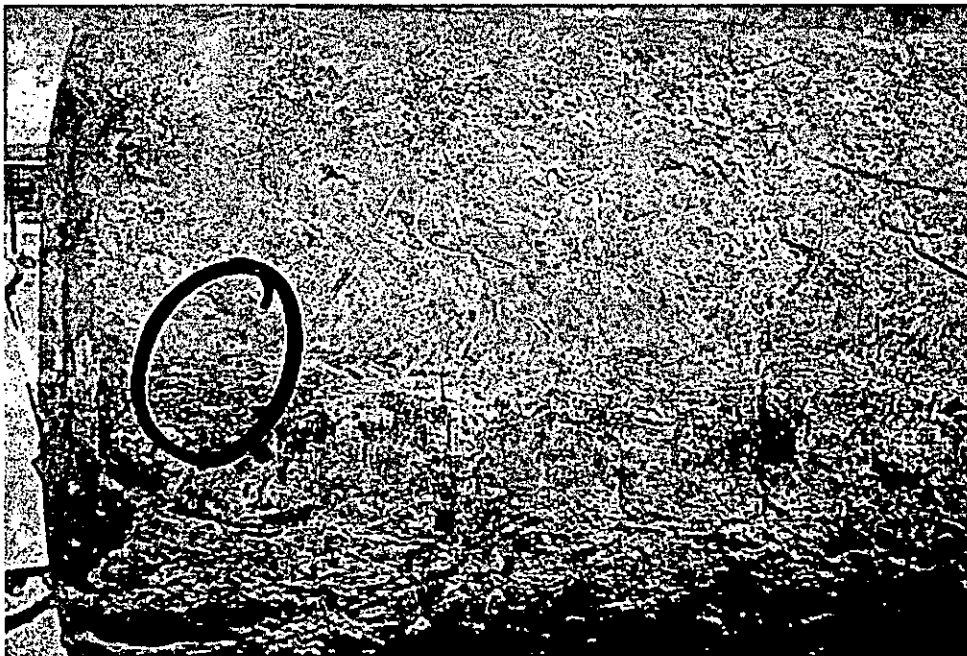


UNDERGROUND STORAGE TANK REMOVAL
Whiteriver Unified School District, Transportation Department
Whiteriver, Arizona
Photo Essay

Photograph 5. The UST is loaded onto a flatbed trailer for transportation to the disposal site.



Photograph 6. A view of the UST with possible holes in it circled.



APPENDIX C

**Whiteriver Unified School District
Transportation Department
200 Cemetary Road
Whiteriver, Arizona 85941**

EPA Facility ID# WMA-004

CERTIFICATE OF TANK DISPOSAL

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BUSBY METAL INC. ●

215 N. PERRY LANE
TEMPE, AZ 85281
(602) 303-9784
Fax 303-9783

NEW STEEL
DEMOLITION
USED STEEL

SCRAP YARD
FERROUS & NONFERROUS
METALS EVERYTHING USEABLE

July 12, 1999

The Verde Company
2703 Union Drive
Suite 1
cotton wood, Arizona 85326

ATTN: Dawn

RE: Death Certificate (White Mountain Apache Tribe)

Dear Dawn:

Busby Metal received from your organization Two (2) Steel Underground Storage Tanks with original capacities of Six (6) Thousand and Fifteen (15) Thousand gallons,

These tanks were identified as being removed from the Transportation Yard (6,000 gal) the other (15,000 gal) north of the Maintenance Shop at the White River Unified School District #20. Both located on lands of the White Mountain Apache Tribe, Arizona; under Region 9 E P A closure authorization Letter WST-8 WMA Site 004 dated June 14, 1999.

At the time of their receipt at our Tempe Arizona location, these tanks were visually inspected and did not appear to contain either product or debris. 15,000 gallon tank formerly contained Diesel and the 6,000 gallon tank formerly contained Gasoline. These tanks were subsequently "Sheared" and "Cut-up" and disposed of as "Scrap Metal" suitable for "Re-melt".

Yours truly,


R. P. Murphy
Controller

APPENDIX D

**Whiteriver Unified School District
Transportation Department
200 Cemetary Road
Whiteriver, Arizona 85941**

EPA Facility ID# WMA-004

LABORATORY ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY DOCUMENTATION

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**ORANGE COAST ANALYTICAL, INC.**

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

The Verde Company

ATTN: Mr. John Tichi
2703 Union Drive
Cottonwood, AZ 86326

Client Project ID: White River Unified School District

Client Project #: Transportation Dept.

JUL 14 1999

Sample Description: Soil

Laboratory Reference #: TVC AZ1484

Sampled: 06/29/99

Received: 07/02/99

Analyzed: 07/06/99

Reported: 07/07/99

Laboratory Sample Number	Client Sample Number	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Total Xylenes (mg/kg)	TPH as Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	MB0702	<0.05	<0.1	<0.1	<0.15	<5.0	96
A99070008	Tank Pit N	<0.05	<0.1	<0.1	0.16	<5.0	91
A99070009	Tank Pit S	<0.05	<0.1	0.35	2.1	31	232*
A99070010	Piping Trench	0.13	<0.1	0.16	0.58	17	166*
A99070011	Dispenser	<0.05	0.12	0.43	1.5	29	182*
A99070012	Stockpile	<0.05	<0.1	0.17	0.94	26	270*

* Matrix Interference

ORANGE COAST ANALYTICAL



Mark Noorani

Laboratory Director

**ORANGE COAST ANALYTICAL, INC.**

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

QC DATA REPORT

Date of Analysis : 07/07/99

Laboratory Sample No : OCA200

Laboratory Reference No : TVC AZ1484

Analyte	R1 (ppm)	SP (ppm)	MS (ppm)	MSD (ppm)	PR1 %	PR2 %	RPD %
Hydrocarbons	0.00	1000	1216	1345	122	135	10

Definition of Terms :

R1	Results Of First Analysis
SP	Spike Concentration Added to Sample
MS	Matrix Spike Results
MSD	Matrix Spike Duplicate Results
PR1	Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$
PR2	Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$
RPD	Relative Percent Difference: $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$

ORANGE COAST ANALYTICAL


Mark Noorani
Laboratory Director

**ORANGE COAST ANALYTICAL, INC.**

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (602) 736-0960 Fax (602) 736-0970

QC DATA REPORT

Date of Analysis : 07/08/99

Laboratory Sample No : OCA 200

Laboratory Reference No : TVC AZ1484

Analyte	R1 (mg/kg)	SP (mg/kg)	MS (mg/kg)	MSD (mg/kg)	PR1 %	PR2 %	RPD %
Benzene	0.00	1.00	1.08	1.12	108	112	4
Toluene	0.00	1.00	1.04	1.10	104	110	6
Ethylbenzene	0.00	1.00	1.04	1.10	104	110	6
Xylenes	0.00	3.00	2.89	3.01	96	100	4

Definition of Terms :

R1 Results Of First Analysis

SP Spike Concentration Added to Sample

MS Matrix Spike Results

MSD Matrix Spike Duplicate Results

PR1 Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$

PR2 Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$

RPD Relative Percent Difference: $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$

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Mark Noorani
Laboratory Director

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QC DATA REPORT

Date of Analysis : 07/06/99

Laboratory Sample No : A99070004

Laboratory Reference No : TVC AZ1484

Analyte	R1 (ppm)	SP (ppm)	MS (ppm)	MSD (ppm)	PR1 %	PR2 %	RPD %
Hydrocarbons	0.00	25	27	24	107	96	11

Definition of Terms :

R1 Results Of First Analysis

SP Spike Concentration Added to Sample

MS Matrix Spike Results

MSD Matrix Spike Duplicate Results

PR1 Percent Recovery Of MS: $\{(MS-R1) / SP\} \times 100$

PR2 Percent Recovery Of MSD: $\{(MSD-R1) / SP\} \times 100$

RPD Relative Percent Difference: $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$

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Mark Noorani
Laboratory Director

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